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GB A 2048687

US 4368734

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(58) Field of search

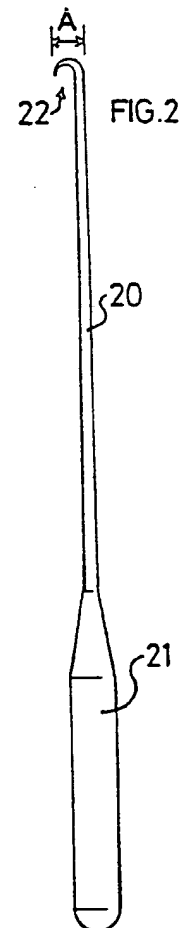
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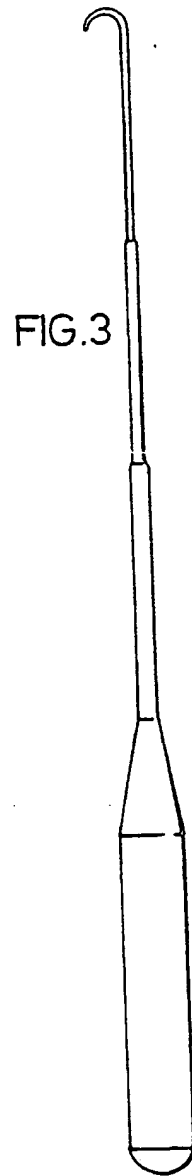
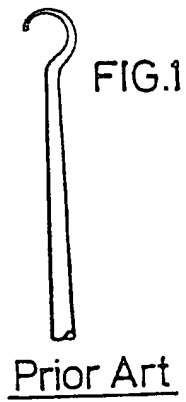
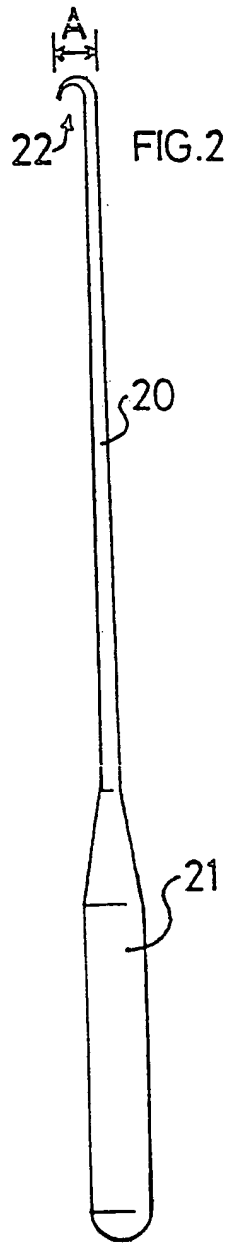
Selected US specifications from IPC sub-class A61B

(54) Vein hook

(57) A surgical instrument is disclosed for assisting a surgeon in hooking a portion of a vein exposed by making an incision in the skin. The instrument comprises a shaft (20) with a handle (21) at one end and a hook (22) at the opposite end. The hook projects substantially entirely to one side only of the shaft (20) and is advantageously curved through an angle substantially equal to 180°.



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SPECIFICATION

Vein hook

- 5 This invention relates to a vein hook.

The term vein hook as used herein refers to a surgical instrument used in the process of stripping varicose veins. When varicose veins are to be stripped, the conventional procedure is to make them with a pencil while the patient stands as this distends the veins. After avulsion of the major veins attention is turned to the individual varicosities. An incision is made over the vein which is to be stripped. A vein hook, being a surgical instrument having a slim elongate shaft with a head in the form of a hook, is then passed through the incision and is used to snare the vein and pull it out through the incision. Further traction often pulls out a length of the vein before it breaks off. In this way by the use of a series of incisions an entire length of a vein may be avulsed serially.

The only vein hook known to the applicant has a hook shaped similarly to a shepherd's crook, namely a hook which projects first to one side of the shaft and then back on itself across to the other side of the shaft. The known shape of hook is illustrated in Fig. 1. It is not known why the conventional vein hook is so shaped but the applicant has long been of the opinion that it is not an ideal shape. The surgeon often makes a number of incisions over the veins and dissects them out. These incisions have to be sutured which renders the procedure time consuming. The incisions are moreover disfiguring. It is desirable to make incisions which are as limited in number and size as possible. Where a haemostat is used to extract the vein there is some difficulty in preventing damage to closely located nerves which may become avulsed with the vein. This is particularly the case around the ankle and foot where the vein and nerves run together and are superficial.

It is sought to provide a vein hook which requires a smaller incision for use or at least to offer the surgeon a hook of different shape.

Accordingly the invention provides a vein hook comprising a shaft with a hook at one end that projects transversely substantially entirely on one side only of the line of the shaft. The hook may be continuous extension of the shaft itself. Preferably the tip of the hook is the part most spaced transversely from the line of the shaft. The hook may be curved through an angle of about 180°, and preferably is substantially semicircular.

By way of example, two embodiments of the invention are now described with reference to Figs. 2 and 3 of the accompanying drawings.

In Fig. 2, the vein hook has a shaft 20 having a handle 21. The shaft may be evenly

tapered from the handle or (as in Fig. 3) may be stepped at intervals so as in either case to decrease in diameter from 3 mm adjacent the handle to about 1 mm adjacent its end where it is curved back on itself through 180° to form a hook 22. The tip of the hook is between 0.5 mm and 0.75 mm. For ease of sterilising and strength and durability, the vein hook is made of polished stainless steel. The hook 22 is somewhat smaller than the hook of the conventional instrument, being about 2.5 mm internal diameter, but its important characteristic is that it projects to one side only of the shaft, the transverse size (dimension A) of the examples in the illustration being 4 mm.

Both the shaft and tip of the instrument are smooth and polished.

The size and shape of the hook are important to the efficacy of the instrument. Use of the instrument with a hook as described enables the length of incisions routinely to be as little as 4 to 6 mm. It will be noted that the smaller of these sizes is no more than the outside diameter of the hook. The reason for this is that the instrument can be turned through 90 degrees or less and the hook inserted tip first through the incision. This is impractical with the conventional instrument. If the hook was curved through more than 180 degrees it would be difficult also to extract the vein through the smallest possible incision since the shaft and hook would have to pass through the incision together. If the hook subtended less than 180 degrees at its centre it would be difficult to pick up the vein and extract it through the incision as the vein would tend to slip off the hook.

Use of a vein hook of the size and shape described allows for extraction of even the largest veins. Incisions of the size required do not need suturing and produce barely perceptible scars. Polishing of the hook tip prevents tearing of the vein but the fine size enables the tip to catch in the wall of a large vein.

Sometimes fine nerve filaments, particularly in the foot and ankle, are extracted together with the vein since they are located close to the vein. In these circumstances, one vein hook according to the invention may be used to hold the vein/nerve complex out of the incision while a second may be used to dissect the nerve filaments from the vein. This is almost impossible using the known vein hooks.

CLAIMS

1. A vein hook comprising a shaft having at one end a hook disposed substantially entirely on one side of the shaft.
2. A vein hook according to claim 1, characterised in that the hook has a tip which is located in a position of maximum external size of the hook.
3. A vein hook according to claim 2, char-

acterised in that the hook is curved through an angle substantially equal to 180° .

4. A vein hook substantially as herein described with reference to Fig. 2 or Fig. 3 of
5 the accompanying drawings.

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